OIPE
NOV 10 2003
PATENT & TRADEMARK OFFICE

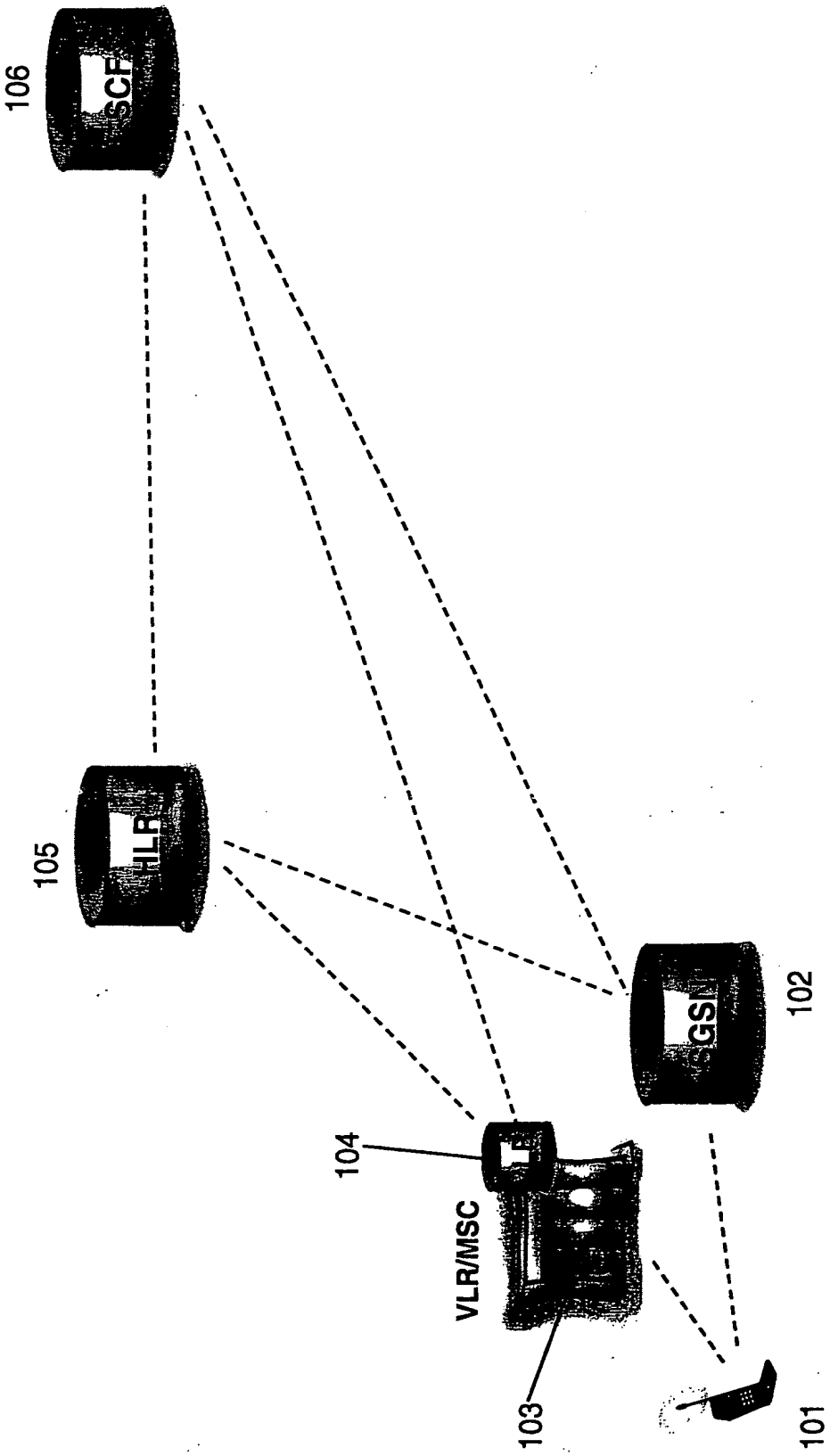

Fig. 1

Fig. 2

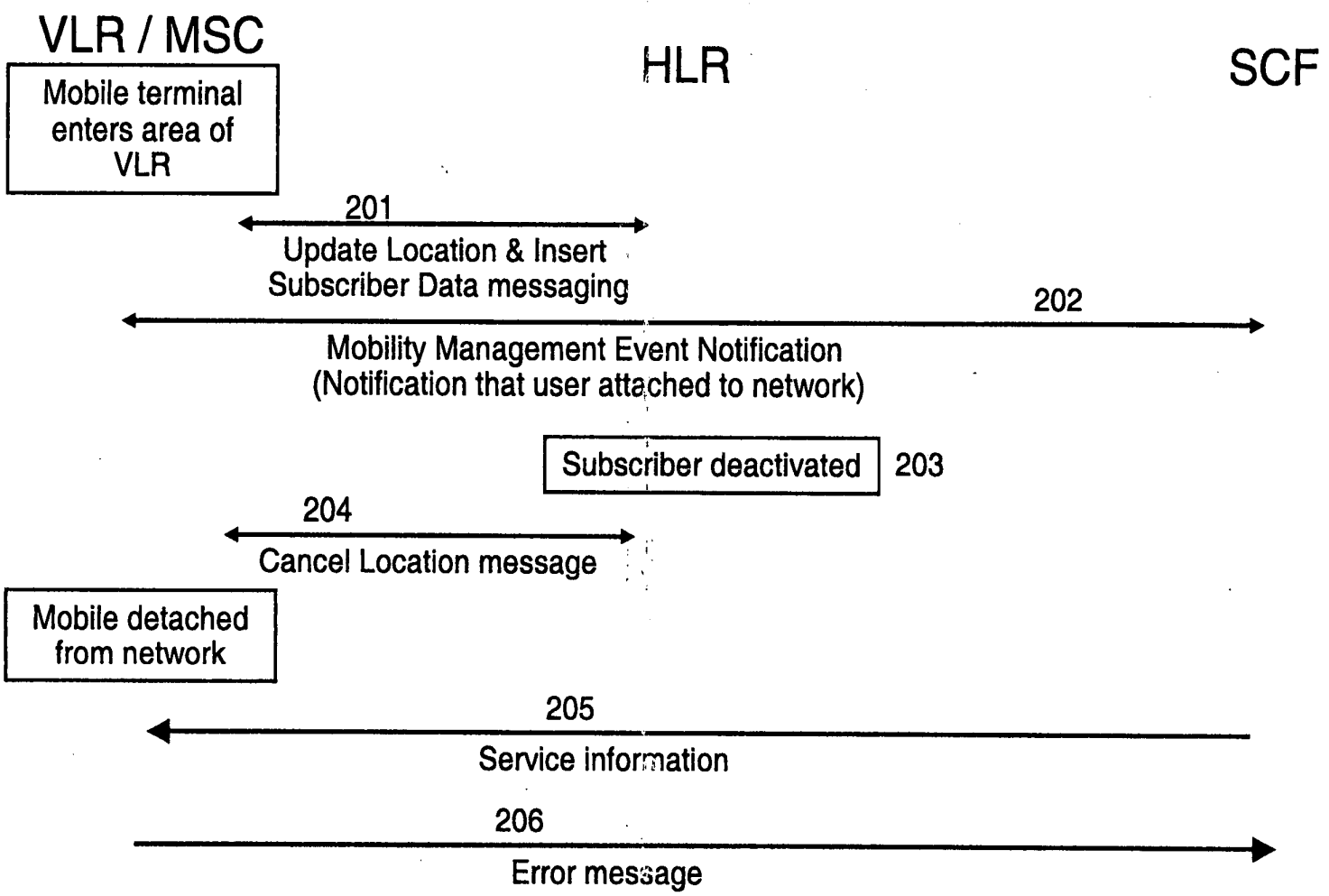
VLR / MSC
HLR
SCF
Mobile terminal enters area of VLR
201
Update Location & Insert Subscriber Data messaging
202
Mobility Management Event Notification
(Notification that user attached to network)
Subscriber deactivated
203
204
Cancel Location message
Mobile detached from network
205
Service information
206
Error message

Fig. 3

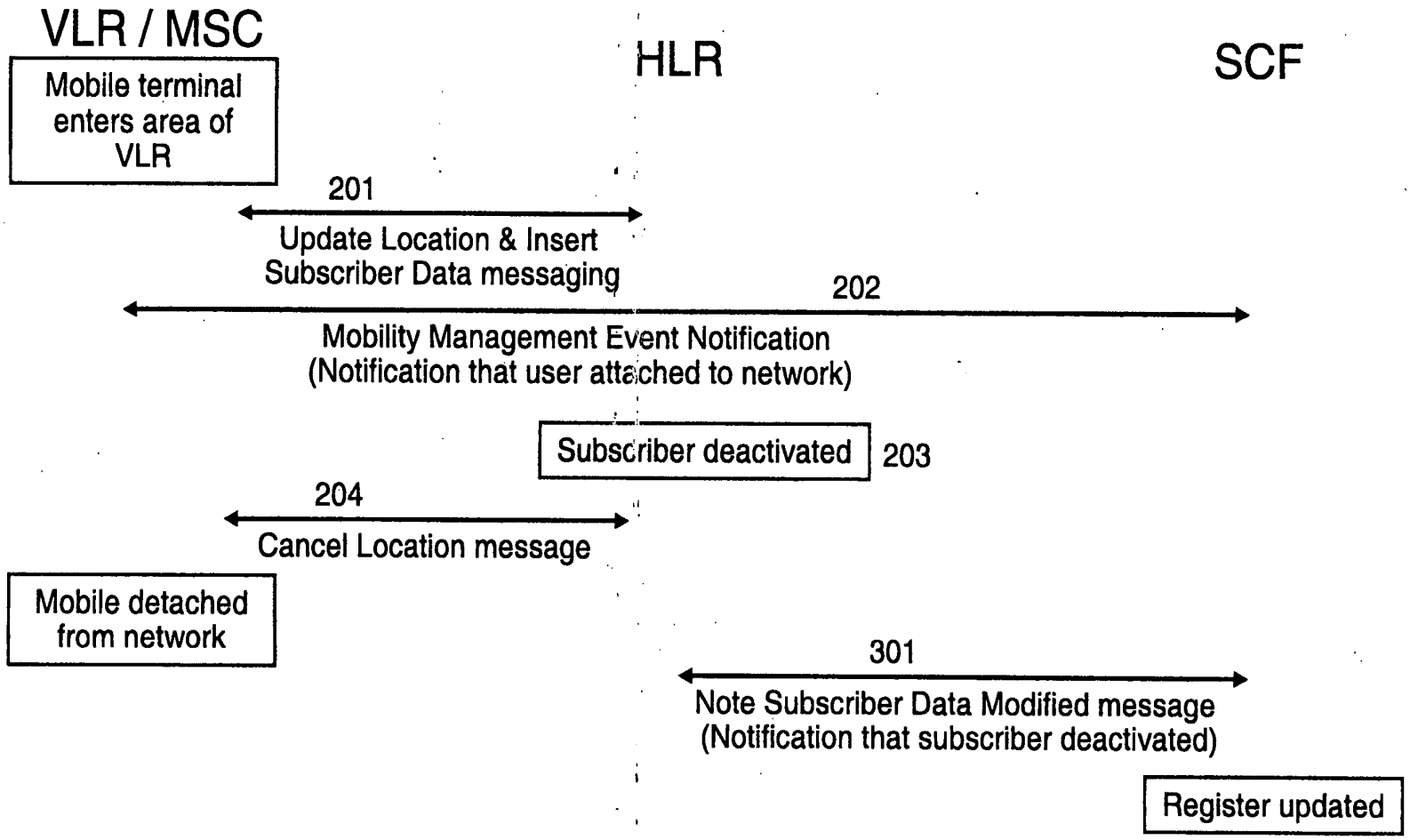
VLR / MSC
HLR
SCF
Mobile terminal enters area of VLR
201
Update Location & Insert Subscriber Data messaging
202
Mobility Management Event Notification
(Notification that user attached to network)
Subscriber deactivated
203
204
Cancel Location message
Mobile detached from network
301
Note Subscriber Data Modified message
(Notification that subscriber deactivated)
Register updated

Fig. 4

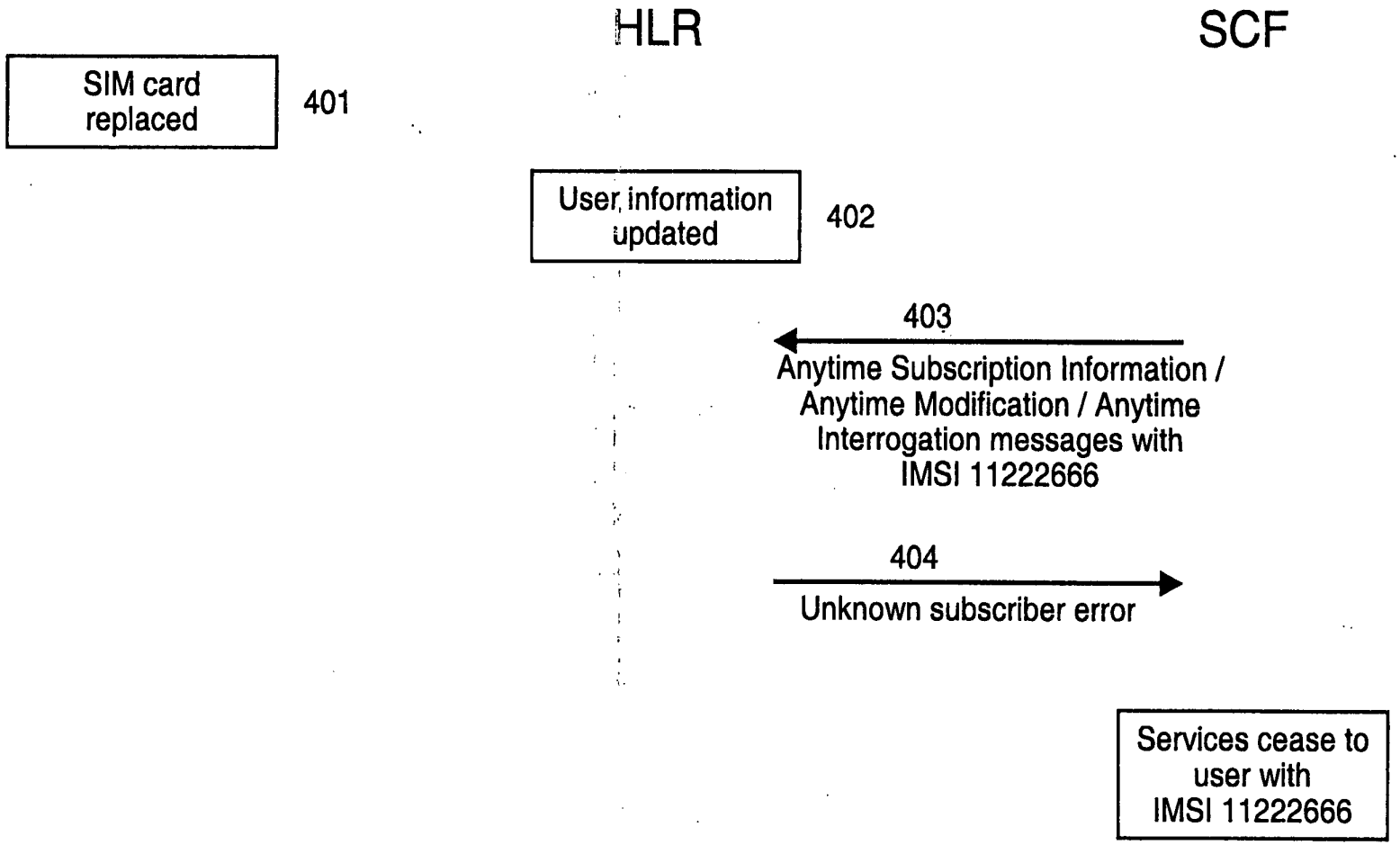
HLR
SCF
SIM card replaced
401
User information updated
402
403
Anytime Subscription Information / Anytime Modification / Anytime Interrogation messages with IMSI 11222666
404
Unknown subscriber error
Services cease to user with IMSI 11222666

Fig. 5

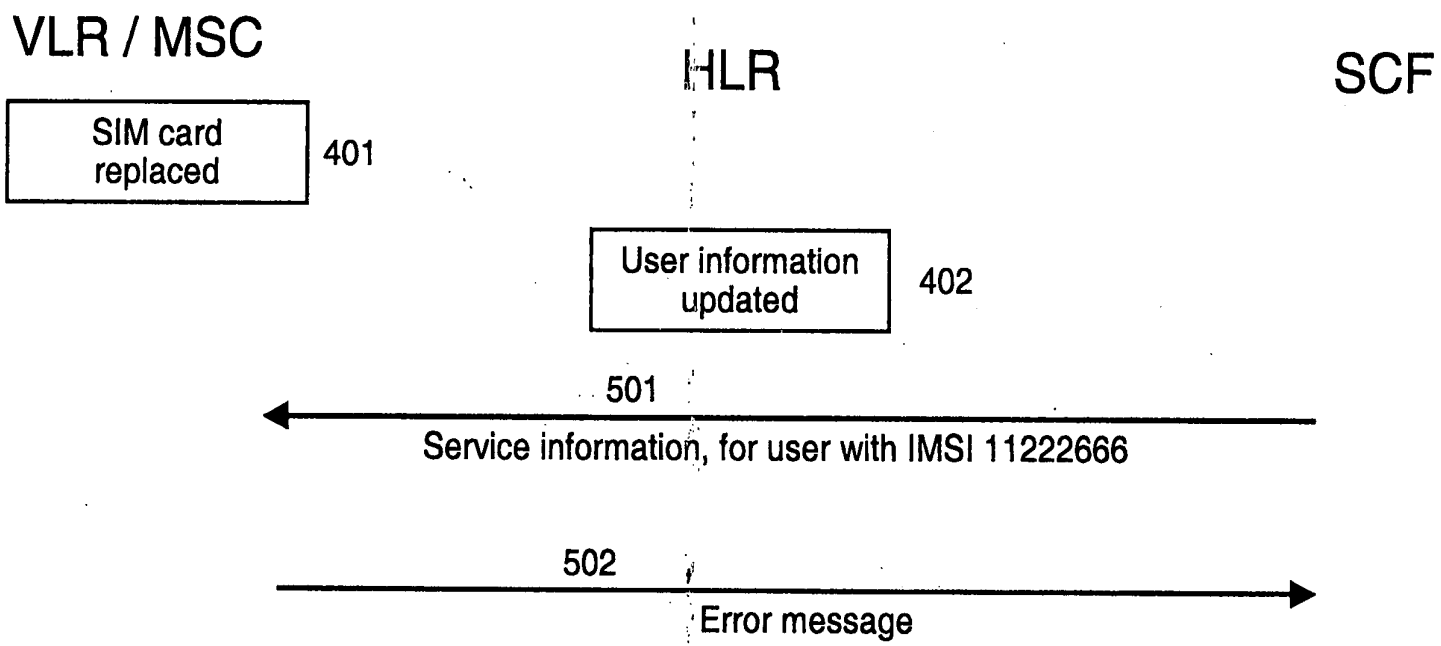
VLR / MSC
HLR
SCF
SIM card replaced
401
User information updated
402
501
Service information, for user with IMSI 11222666
502
Error message

Fig. 6

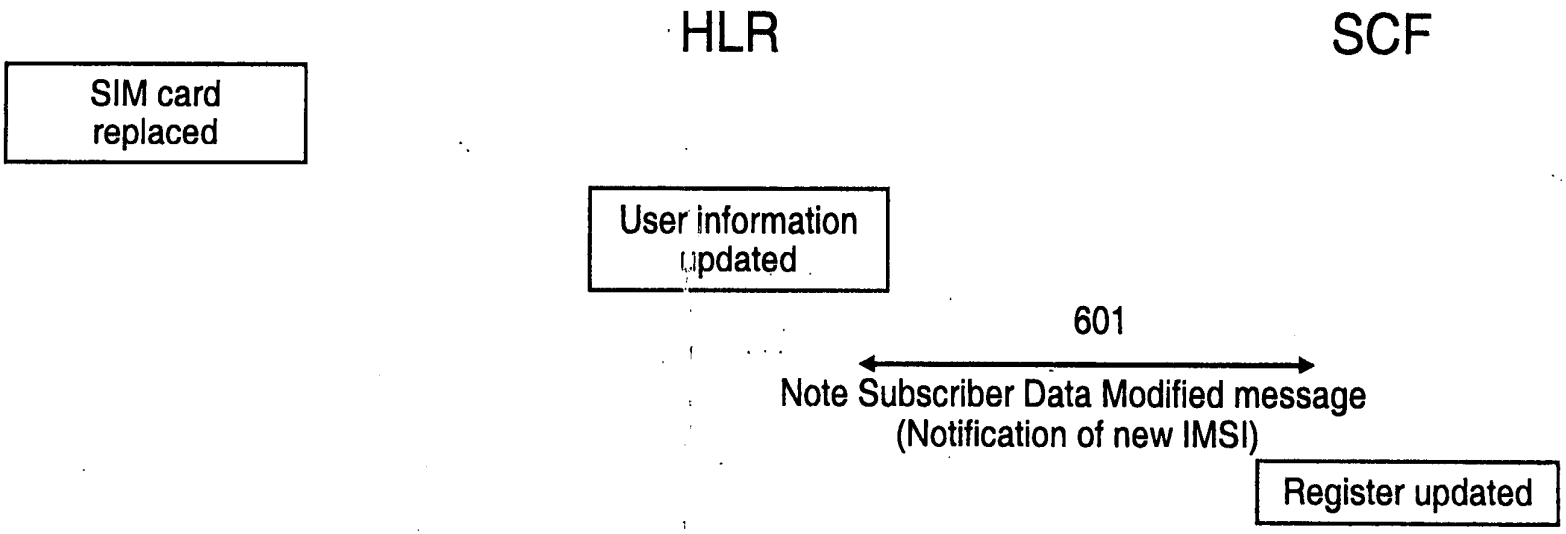
HLR
SCF
SIM card replaced
User information updated
601
Note Subscriber Data Modified message
(Notification of new IMSI)
Register updated

Fig. 7

NoteSubscriberDataModified

```
Not SubscriberDataModifiedArg ::= SEQUENCE {
    imsi                        IMSI,
    msisdn                      ISDN-AddressString,
    forwardingInfoFor-CSE       [0] Ext-ForwardingInfoFor-CSE       OPTIONAL,
    callBarringInfoFor-CSE      [1] Ext-CallBarringInfoFor-CSE      OPTIONAL,
    odb-Info                    [2] ODB-Info                        OPTIONAL,
    camel-SubscriptionInfo      [3] CAMEL-SubscriptionInfo          OPTIONAL,
    allInformationSent          [4] NULL                            OPTIONAL,
    extensionContainer          ExtensionContainer                  OPTIONAL,
    ...
    replacementImsi             [5] IMSI                            OPTIONAL,
    subscription-Status         [6] subscription-Status             OPTIONAL}

Subscription-Status ::= SEQUENCE {
    cs-subscriptionStatus       [1] BOOLEAN                         OPTIONAL,
    ps-subscriptionStatus       [2] BOOLEAN                         OPTIONAL,
     xtensionContainer          ExtensionContainer                  OPTIONAL,
    ...}
```

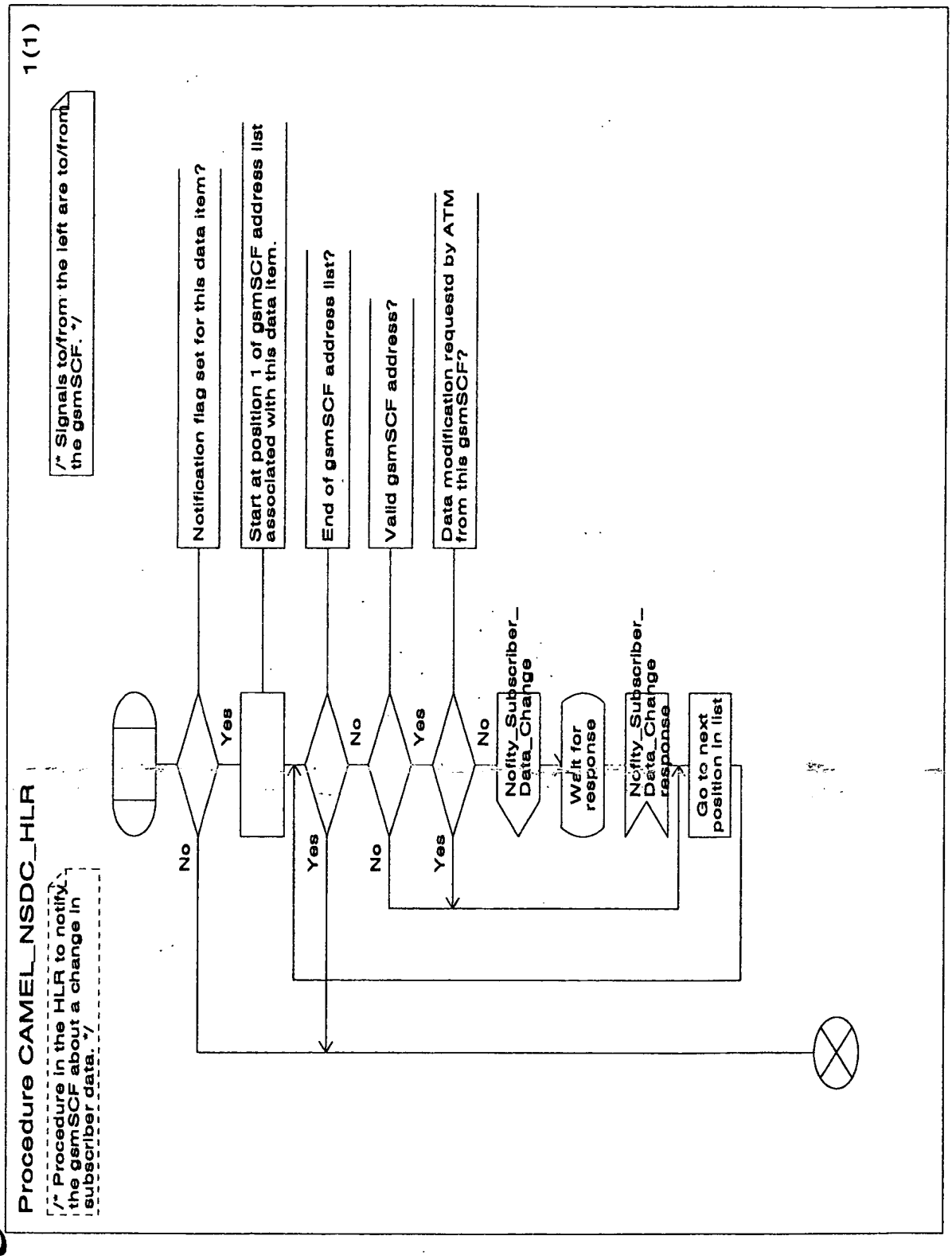
Procedure CAMEL_NSDC_HLR
/* Procedure in the HLR to notify the gsmSCF about a change in subscriber data. */
1 (1)
/* Signals to/from the left are to/from the gsmSCF. */
Notification flag set for this data item?
Start at position 1 of gsmSCF address list associated with this data item.
End of gsmSCF address list?
Valid gsmSCF address?
Data modification requestd by ATM from this gsmSCF?
Yes
No
Nofity_Subscriber_Data_Change
Wait for response
Nofity_Subscriber_Data_Change response
Go to next position in list

Fig. 8